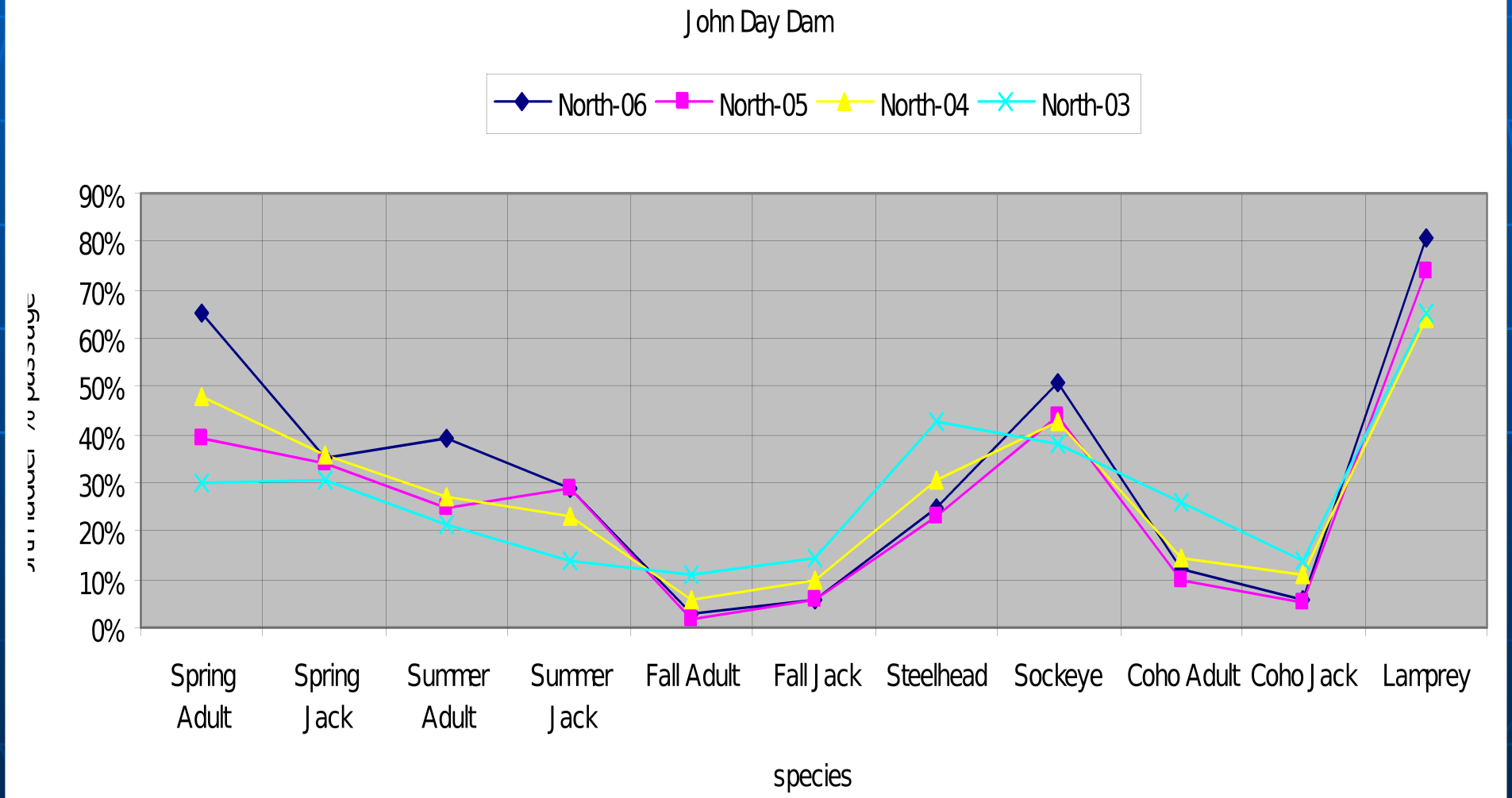
JDA T-1 Outage & Hi flow/spill effects at Lower Columbia River Dams: 2006

- JDA T-1 outage and fish passage.
- TDA ladder usage.
- BON fallback, reascension, and effects on escapement.

2006 JDA North Ladder Passage: Counts



PNNL ITAP Report Results

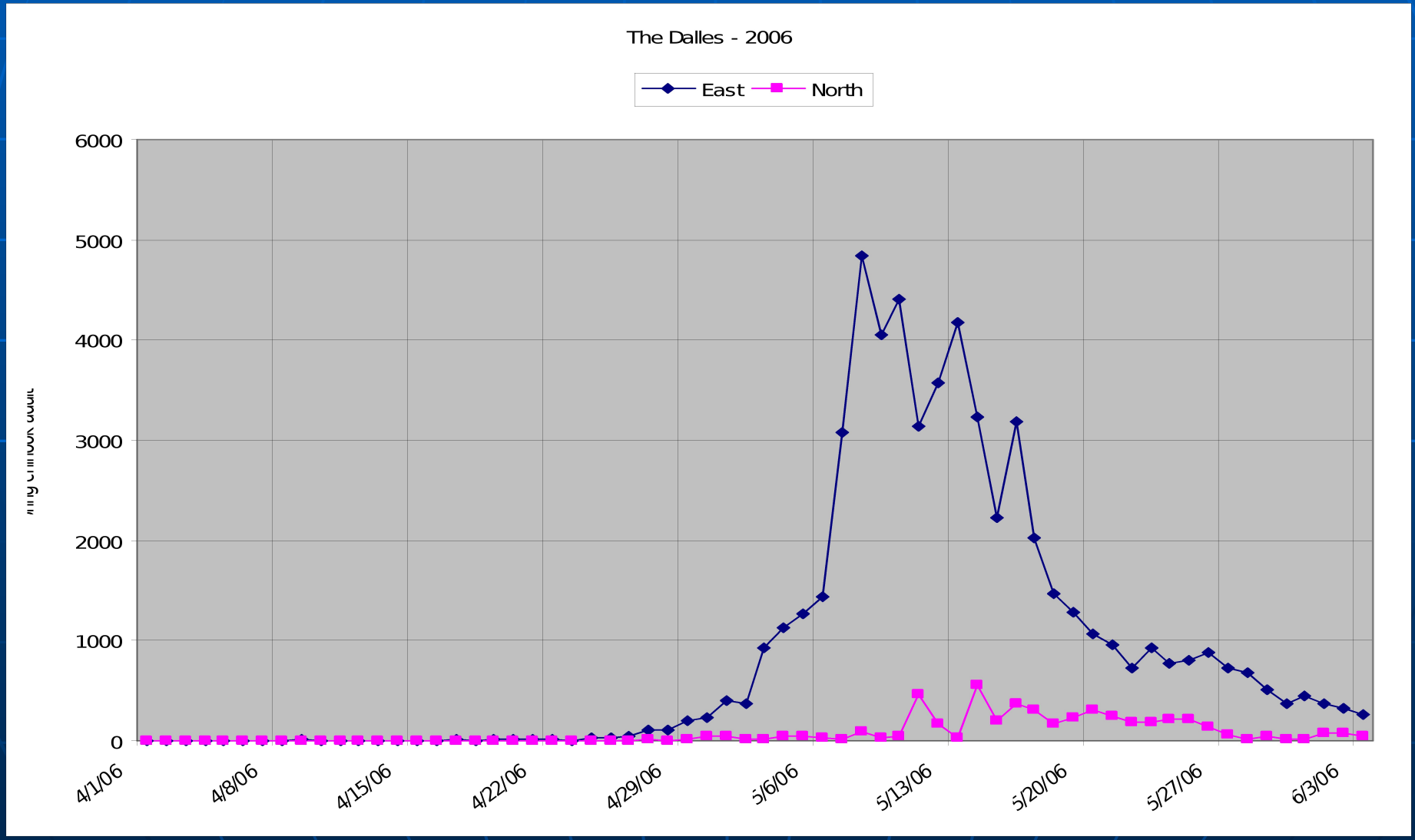
Table 3. Estimates (and 95% confidence intervals) of the mean daily proportion of fish using the south ladder of John Day Dam (April 1 through June 22) from logistic regression model including only the "year" variable.

	Chinook Adults	Chinook Jacks	Steelhead Hatchery	Steelhead Wild
2003	0.73 (0.70 - 0.76)	0.74 (0.71 - 0.77)	0.59 (0.53 - 0.65)	0.49 (0.43 - 0.55)
2004	0.57 (0.54 - 0.60)	0.71 (0.67 - 0.74)	0.59 (0.54 - 0.64)	0.46 (0.41 - 0.51)
2005	0.68 (0.64 - 0.72)	0.71 (0.66 - 0.77)	0.60 (0.54 - 0.65)	0.52 (0.46 - 0.59)
2006	0.50 (0.45 - 0.54)	0.68 (0.61 - 0.74)	0.46 (0.41 - 0.52)	0.33 (0.27 - 0.39)

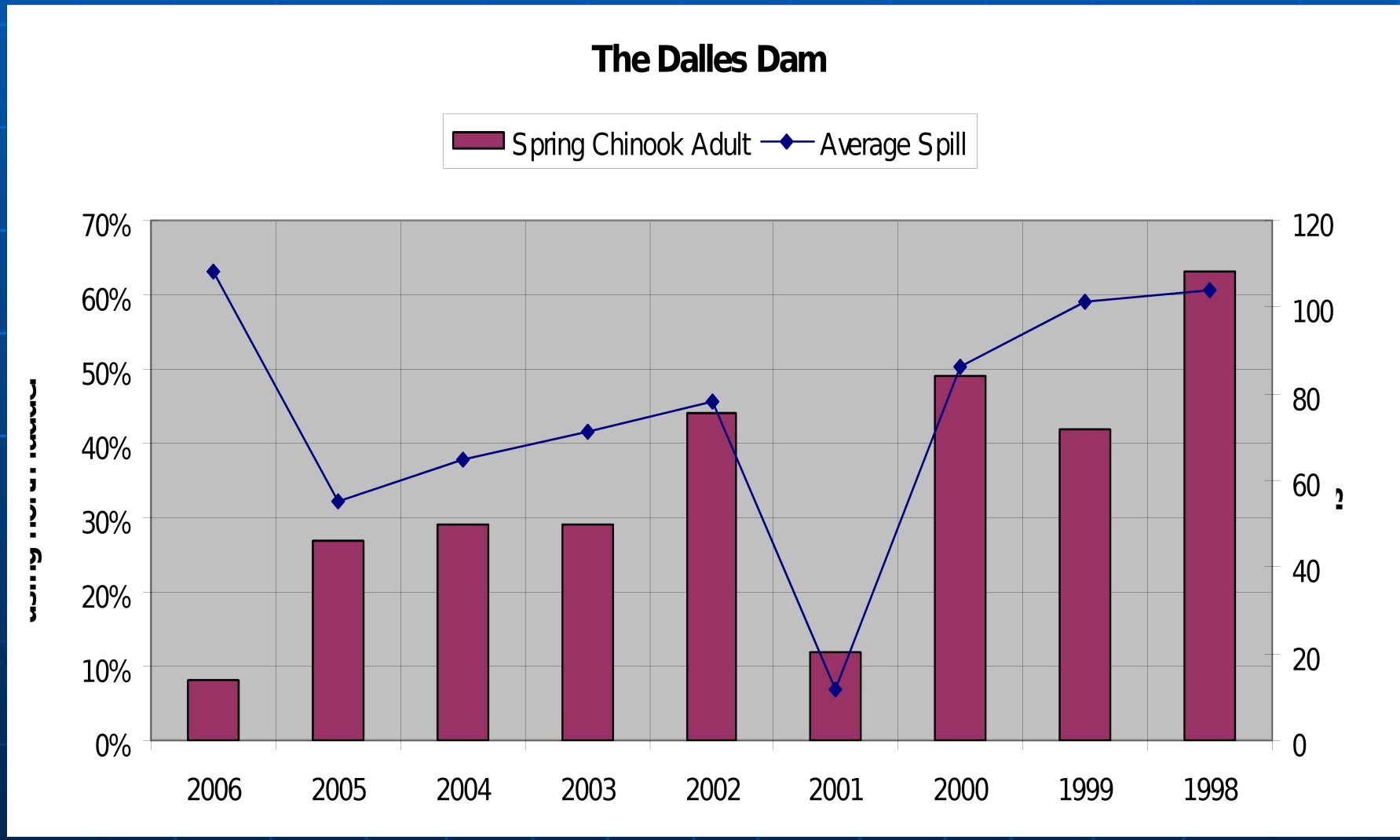
JDA T-1 Outage and Sp Ch Passage

- Significant reduction in % south ladder passage but still had considerable use.
  - Much of variance not explained by outage (flow, spill, temp effects also may be involved).
- RT Sp Ch median passage time via north ladder nearly twice as fast as south ladder (12.7 vs. 23.8 hrs)
- Overall median (17.0 hrs) passage time in low-mid range of historic passage times.
- 50 % of Sp Ch first approached dam at OGs (may have followed edge of eddy to center of dam).

2006 Spring Chinook Passage by Ladder: TDA



Spring Chinook TDA North Ladder Passage: 1998-2006



2006 TDA Spring Hi Flow/Spill Results

- High mean Sp spill around 110 kcfs.
- Significant drop in Sp Ch N ladder use from 25-30% (03-05) to 7%.
  - Effect likely related to new Juvenile spill pattern concentrating spill to N end.
- No apparent effect on passage times from BON exit to TDA exit or JDA exit.
- TDA will be wired up for 2007 SP CH RT fish passage evaluation.

2006 BON Hi Flow/Spill: Effects on Fallback, Reascension, and Escapement (RT study)

- Nearly **14% Fallback** (88% BI exit):
  - Highest % since 1996 with B2 priority.
- **Less than 50% reascension** rate:
  - Lowest ever, previous low 65%, mean around 75%).
- If above is representative, hydro-system **escapement was reduced 7%** at BON.
  - DART unadjusted escapement estimate of **69%** for all SR SP Ch lowest ever (79.3% mean 00-05)
- No effects found on passage of Sp Ch related to Sea Lion deterrents during block test.